

REMARKS

The Amendment is submitted in response to a non-final Office Action mailed October 14, 2008. Claims 41-80 are currently pending in this application, with claims 50-62 and 72-80 withdrawn from consideration. Claims 41-43, 46, 49, 63-65, 68 and 71 stand provisionally rejected on the grounds of nonstatutory obviousness-type double patenting. Claims 46 and 68 stand rejected under 35 U.S.C. §112, second paragraph. Claims 41-43, 46-49, 63-65, and 67-71 stand rejected under 35 U.S.C. §102(b). Claims 44, 45, 66 and 67 stand rejected under 35 U.S.C. §103(a). In response, Applicants have amended claims 41, 42, 63 and 64, and have cancelled claims 43, 46, 65 and 68. No new material has been added by way of these amendments. The Commissioner is hereby authorized to charge deposit account 02-1818 for any fees which are due and owing.

In the Office Action, the Examiner has asserted that the title of the invention is not descriptive, and that a new title is required that is clearly indicative of the invention to which the claims are directed. Applicant presumes that the Examiner's issue is that the method of manufacturing claims have been withdrawn. In response to that apparent issue, Applicants have revised the title of the application to remove the concept of a PROCESS FOR PRODUCING THE SAME.

In the Office Action, claims 46 and 68 are rejected under §112, second paragraph, as indefinite. The Examiner asserts that it is unclear what the ratio of carbon in the claim is relative to. This rejection is now moot in view of the amendments to the claims. However, Applicants note that the ratio of carbon, as is now present in currently amended claims 41 and 63, is the ratio of carbon in the reaction phase. Specifically, paragraph [0011-0015] describe the reaction phase containing carbon and an element capable of generating an intermetallic compound with lithium. Also, paragraph [0092] in the experimental section is titled "Discussion about ratio of carbon: Examples 6-1 to 6-17." As can be seen in Table 6-1 through 6-3 which describe Examples 6-1 to 6-17, and in fact all the other example tables, the ratio of carbon is a weight percent of the reaction phase, with the other portion of weight percent being the element capable of generating an intermetallic compound with lithium.

In the Office Action, claims 41, 47-49, 63 and 69-71 are rejected under §102(b) as anticipated by U.S. Patent 6,485,864 (hereinafter "Miyazawa.") Independent claims 41 and 63

have been amended to incorporate claims 43 and 46 into claim 41, and 65 and 68 into claim 63. Because no rejection in view of claims 43, 46, 65, and 68 is asserted under this reference, this rejection is now moot, and Applicants respectfully request it be withdrawn.

In the Office Action, claims 41, 42, 45, 46, 63, 64, 67 and 68 are rejected under §102(b) as anticipated by JP 2001-052691 (hereinafter "Kono.") As noted above, independent claims 41 and 63 have been amended to incorporate claims 43 and 46 into claim 41, and 65 and 68 into claim 63. Because no rejection in view of claims 43 and 65 is asserted under this reference, this rejection is now moot, and Applicants respectfully request it be withdrawn.

In the Office Action, claims 41-43, 46, 48, 49, 63-65, 68, 70 and 71 are rejected under §102(b) as anticipated by WO 01/48840 (hereinafter "Dahn."). Applicants respectfully traverse this rejection as applied to instant claims 41 and 63, which have incorporated previous claims 43 and 46 and previous claims 65 and 68, respectively. Independent claim 41 recites an anode material having a reaction phase containing an element capable of generating an intermetallic compound with lithium, and carbon. The reaction phase contains tin, and at least one constituent selected from the group consisting of nickel, copper, iron, cobalt, manganese, zinc, indium, and silver. The carbon is present in a weight ratio of between 5% by weight and 50% by weight. Support for the carbon weight percent range can be found in paragraph [0042] in addition to the Examples. Independent claim 63 contains parallel language. In contrast, Dahn does not teach or suggest a ratio for carbon of between 5% by weight and 50% by weight. Generally, the carbon used in Dahn, as noted throughout the specification and in the claims, is an optional constituent of the anodes. This would be in stark contrast to the claimed invention, in which carbon is specifically required, and particularly in view of the additional limitation relating to the characteristic carbon peak in the X-ray photoelectron spectra. Second, Example 1, cited specifically by the Examiner, does not meet the limitation of 5 weight percent because the carbon is present in only 4 weight percent. Example 3 is similarly deficient in carbon. For this reason, Applicants respectfully assert that Dahn does not anticipate the claimed invention, and respectfully request the rejection be withdrawn.

In the Office Action, claims 41-43, 46-69, 63-65 and 68-71 are rejected under §102(b) as anticipated by JP 2000-311681 (hereinafter "Kawakami.") Applicants respectfully traverse this rejection as applied to instant claims 41 and 63, which have incorporated previous claims 43 and

46 and previous claims 65 and 68, respectively. As discussed above, independent claims 41 and 63 have been amended to require the limitation of carbon present in a weight ratio of between 5% by weight and 50% by weight, and a reaction phase containing tin, and at least one constituent selected from the group consisting of nickel, copper, iron, cobalt, manganese, zinc, indium, and silver. Applicants respectfully assert that Kawakami does not teach or suggest a negative electrode with 5-50% by weight of carbon in the reactive phase and therefore traverse the rejection. As the Examiner has noted, paragraph [0099] describes amorphous alloys having tin, carbon and at least one other metal such as cobalt, iron, nickel and copper. However, Kawakami does not teach the required ranges. Specifically, throughout the examples, the carbon values the preparations in Kawakami give weight ratios that are below about 5% weight, as required by the claimed invention. Specifically, both Table 7 and 8 recite a tin-cobalt-carbon material that is $\text{Sn}_{40.5}\text{Co}_{53.9}\text{C}_{5.6}$ as an atomic ratio. Conversion based on molecular weights give a weight ratio of carbon of 0.8% weight. Table 11 describes a $\text{Sn}_{1.1}\text{Co}_{3.3}\text{C}_{1.0}$ alloy (atomic ratio), which contains 3.9% weight carbon. Table 12 describes a $\text{Sn}_{59.9}\text{Co}_{30.2}\text{C}_{9.9}$ (atomic ratio), which gives a carbon weight ratio of 1.4%. None of these examples meets the limitations set forth in the claimed invention of between about 5% by weight and about 50% by weight of carbon. Because Kawakami does not teach or suggest the limitation with regard to the ratio of carbon by weight, it does not teach or suggest the currently claimed invention. Therefore Applicants respectfully assert that the rejection in view of Kawakami be withdrawn.

In the Office Action, claims 41-43, 46, 49, 63-65, 68 and 71 stand provisionally rejected on the grounds of nonstatutory obviousness-type double patenting in view of copending applications No. 11/267,641, 12/026594, 11/268,010, 11/267,116, and 11/225,540. The rejections are provisional and in any event the claims have been amended at this point. At such a time as this or one of the other applications reaches allowance, the provisional rejection can be addressed for the version of claims that contain a issue of obviousness-type double patenting, but at this juncture, no terminal disclaimer is required.

In the Office Action, the Examiner has asserted that the title of the invention is not descriptive, and that a new title is required that is clearly indicative of the invention to which the claims are directed. Applicant presumes that the Examiner's issue is that the method of manufacturing claims have been withdrawn. In response to that apparent issue, Applicants have

revised the title of the application to remove the concept of a PROCESS FOR PRODUCING THE SAME.

For the reasons set forth above, Applicants respectfully assert that the claimed invention is not anticipated or made obvious by the asserted prior art. Applicants request that the anticipation rejections be withdrawn and further submit that the present application is in condition for allowance.

Respectfully submitted,

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